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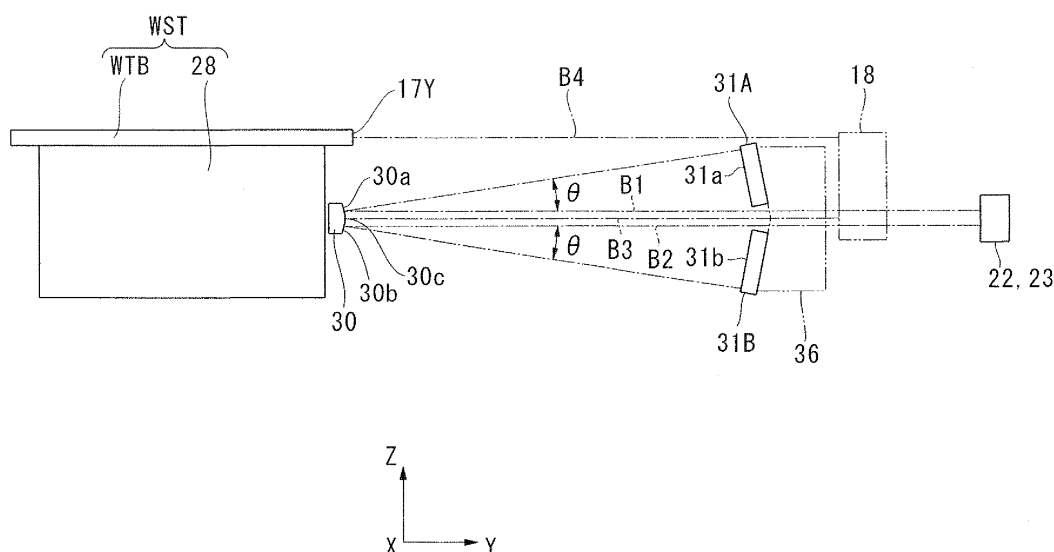
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(54) **Reflector, optical element, interferometer system, stage device, exposure apparatus, and device fabricating method**

(57) A reflecting member has: a first reflecting surface (30a), which extends in a second direction that includes a first direction component; a second reflecting surface (30b), which extends in a third direction that in-

cludes the first direction component, that is substantially symmetric to the first reflecting surface (30a); and a third reflecting surface (30c), which extends in a fourth direction, that is substantially orthogonal to the first direction.

FIG. 4





## EUROPEAN SEARCH REPORT

Application Number  
EP 11 15 9534

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	US 2005/111005 A1 (EUSSEN EMIEL J M [NL] ET AL EUSSEN EMIEL JOZEF MELANIE [NL] ET AL) 26 May 2005 (2005-05-26) * figure 3b *	1-16	INV. G02B5/08 G01B9/02 G03F7/20 H01L21/027 H01L21/68
X	WO 99/28790 A1 (ASM LITHOGRAPHY BV [NL]) 10 June 1999 (1999-06-10) * figure 7 *	1-16	
X	JP 10 170217 A (MITSUBISHI ELECTRIC CORP) 26 June 1998 (1998-06-26) * abstract; figures 1-14 *	17-23	
A		1-16	
X	US 2004/047027 A1 (CARLSON ANDREW ERIC [US]) 11 March 2004 (2004-03-11) * the whole document *	17-23	
A		1-16	
X	WO 03/019112 A1 (ZYGO CORP [US]; HILL HENRY A [US]) 6 March 2003 (2003-03-06) * figure 2 *	17-23	
			TECHNICAL FIELDS SEARCHED (IPC)
			G02B G03F
The present search report has been drawn up for all claims			
Place of search Munich		Date of completion of the search 24 July 2012	Examiner Daffner, Michael
<p>CATEGORY OF CITED DOCUMENTS</p> <p>X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document</p> <p>T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons &amp; : member of the same patent family, corresponding document</p>			

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**CLAIMS INCURRING FEES**

The present European patent application comprised at the time of filing claims for which payment was due.

☐ Only part of the claims have been paid within the prescribed time limit. The present European search report has been drawn up for those claims for which no payment was due and for those claims for which claims fees have been paid, namely claim(s):

☐ No claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for those claims for which no payment was due.

**LACK OF UNITY OF INVENTION**

The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

see sheet B

☒ All further search fees have been paid within the fixed time limit. The present European search report has been drawn up for all claims.

☐ As all searchable claims could be searched without effort justifying an additional fee, the Search Division did not invite payment of any additional fee.

☐ Only part of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the inventions in respect of which search fees have been paid, namely claims:

☐ None of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims, namely claims:

☐ The present supplementary European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims (Rule 164 (1) EPC).



**LACK OF UNITY OF INVENTION  
SHEET B**

Application Number  
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The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

1. claims: 1-16, 24-26

An interferometer  
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2. claims: 17-23

A polarizing beam splitter  
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**ANNEX TO THE EUROPEAN SEARCH REPORT  
ON EUROPEAN PATENT APPLICATION NO.**

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This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.  
The members are as contained in the European Patent Office EDP file on  
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24-07-2012

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